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EMPOWERING EUROPEAN INNOVATORS

FET in the European Innovation Council EIC Pathfinder 2019- 2020

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Research and
Innovation





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FET in the European Innovation Council State-of-Play

Research and
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EIC: the European Innovation Council

FROM IDEA TO INVESTMENT



PATHFINDER:
Researchers, technologists

Advanced research & technology
Proof-of-concept & demonstration



ACCELERATOR:
Start-ups, SMEs
and entrepreneurs

Innovation development & scale-up
Bridging the gap to investors & markets

Coaching, mentoring and business acceleration services

EIC Pathfinder: building on the success of Future and Emerging Technologies

FET-Open

Bottom-up – exploratory deep-tech collaborations

FET-Proactive

Top-down - consolidation of paradigms and interdisciplinary communities

Transition to Innovation

Pushing results up to TRL 6 – innovation ready



*Strategic portfolio management
through
Programme Managers*

Within EIC, the spirit of FET remains the same



**From
cutting-edge
SCIENCE ...**

**... to disruptive
TECHNOLOGY
of the future**

<https://webcast.ec.europa.eu/the-fet-spirit-revisited-recording>



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EIC Pathfinder FET-Open

Maciej Lopatka

Call Coordinator

EIC Pathfinder FET-Open

Research Executive Agency

European Commission

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EIC Pathfinder – FET Open

2019-2020 (new WP adopted on 2 July 2019)

- FET-Open Research and Innovation Actions
 - Supporting high-risk interdisciplinary collaborative research on the technologies of the future
 - Ideas from any area of technology or business sector including novel combinations of technologies and business models
 - Always very attractive, but still competitive: success rate now above 10%
- FET Innovation Launchpad
 - First steps for turning results from FET funded projects into genuine societal/economic innovations
 - Cut-off in 2020 included in Lump Sum pilot (great simplification for the beneficiaries)



FET Open (RIA): FETOPEN-01-2018-2019-2020

- Foundations for **radically new future technologies**
- **High-risk/high-impact** breakthrough research
- **Highly interdisciplinary**
- No thematic restriction - completely **bottom-up**, but with a **clear technological target**
- **Collaborative research** (min. 3 partners from different MS/AC)
- Successful FET-Open project can be a proof-of-concept
- EU contribution of up to 3M€ (indicative)
- 15-pages (A4) proposal

**FETOPEN-01-2018-2019-2020:
1 cut-off date left
13 May 2020: 196.20 M€**

FET Open (RIA): FETOPEN-01-2018-2019-2020

Scope

Proposals are sought for **cutting-edge high-risk/high-impact interdisciplinary research** with ALL of the following essential characteristics so-called "**FET gatekeepers**" (in-scope/out-of-scope)

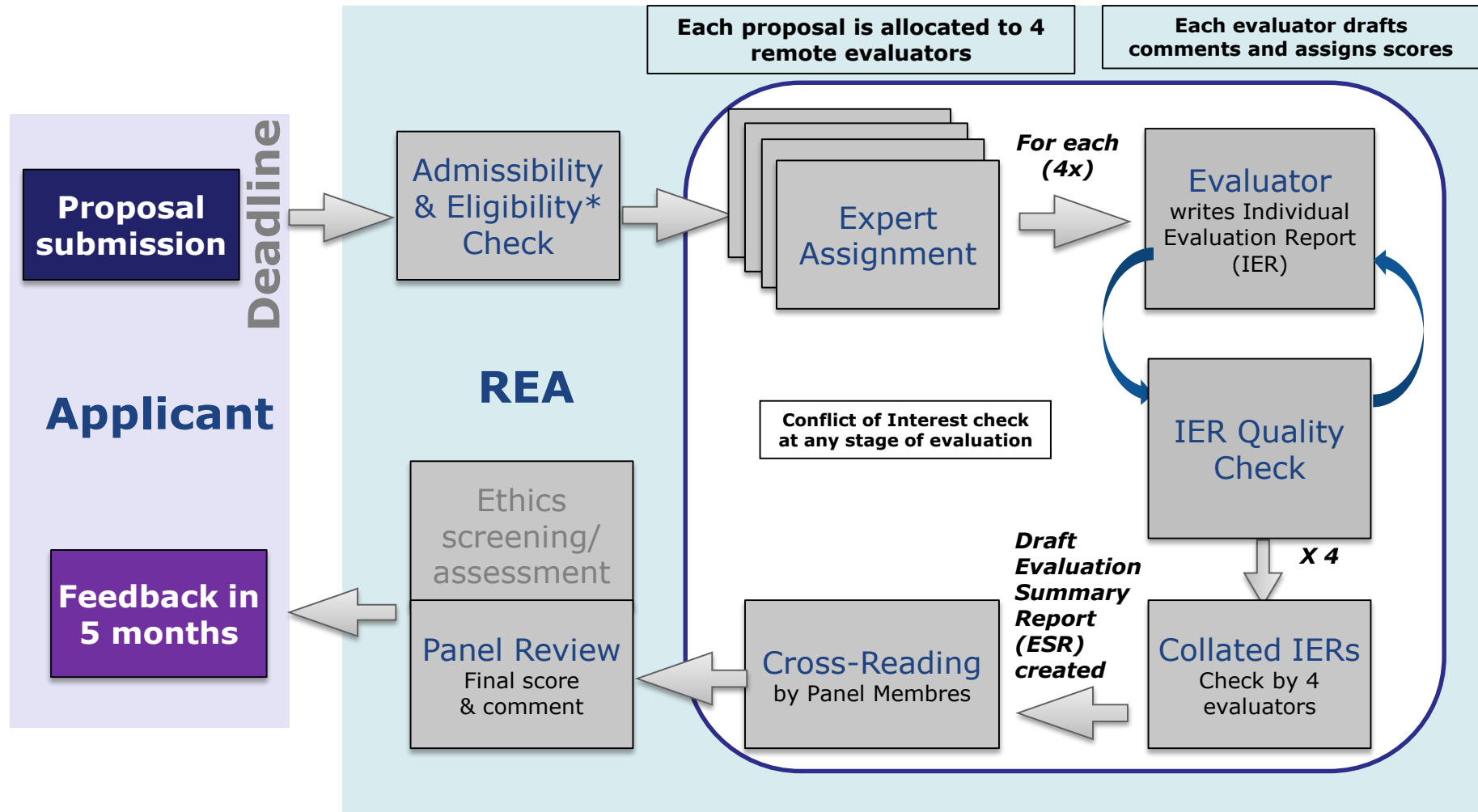
- Radical vision
- Breakthrough technological target
- Ambitious interdisciplinary research

<https://www.youtube.com/watch?v=t8dAJvoiguM>

FET Open (RIA): FETOPEN-01-2018-2019-2020

Evaluation

- Three award criteria **stay the same**
 - **Excellence**: weight of 60%, threshold of 4
 - **Impact**: weight of 20%, threshold of 3,5
 - **Implementation**: weight of 20%, threshold of 3
- Evaluation process **stays the same**
- Out-of-scope (**FET gatekeepers**) proposals become ineligible
- Possible advice not to resubmit the proposal





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**EIC Pathfinder
FET Proactive 2019-2020**

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FET Proactive: emerging paradigms and communities

Specific Challenge:

- Explore and consolidate a new paradigm for future technology.
- Foster the interdisciplinary communities to drive this forward.
 - Reaching wider than consortium alone!
 - Project as a global reference of excellence in the field.
- Stimulate the emergence of an innovation eco-system around the new paradigm.
 - Reach-out beyond the world of research alone.

FET Proactive: emerging paradigms and communities

Scope:

- Cutting-edge high-risk / high-reward research and innovation.
 - Science-driven 'deep tech'.
 - Interdisciplinarity is key
 - No incremental research, i.e.,
 - Ambitious vision and targets
 - Currently unreachable through current path
 - Requires bringing in of new knowledge that opens up a new path
 - This is what is meant by high-risk
 - No blue-sky, no ivory tower.
- Demonstrate a new technological paradigm
 - Demonstrate game changing potential
 - This is what is meant by high-reward

Europe's biggest innovation potential is in the blending of knowledge, data and skills from across disciplines and sectors. This interdisciplinary aspect, often led by digital, is what makes deep-tech so hard to replicate, and therefore so strategic for Europe's future.

(Commissioner Gabriel, June 2019)

FET Proactive: emerging paradigms and communities

Scope:

- Establish a solid baseline of knowledge and skills
 - Assemble interdisciplinary communities
 - Including from the social sciences and humanities
 - Create a fertile ground for co-design and future take-up
 - Actions to reach/involve downstream stakeholders
 - Responsible Research and Innovation (RRI)
-
- 'Deep-tech' as a new alliance between science, technology and society – a start-to-end joint experiment
 - See also the FET WP introduction on RRI
 - Consider the use of 'cascading grant' for this (Annex K)

Impacts



**New exciting science
And technology**



**Potential returns for
society, economy and
markets**



**Creating the community of
researchers and innovators
that will change the future**

FETPROACT-EIC-05-2019**budget: 87,4M€**

Emerging paradigms and communities

- To explore and consolidate a new technological direction in order to put it firmly on the map as a viable **paradigm for future technology**.
- Stimulate the emergence of a European innovation eco-system around a **new technological paradigm**
- **Scope is one of the following subtopics:**
 - a. Human-Centric AI
 - b. Implantable autonomous devices and materials
 - c. Breakthrough zero-emissions energy generation for full decarbonisation
- Indicatively, up to **€4 million and up to 4 years**
- Minimum **3 partners** from 3 EU / AC
- 'Cascading grants' possible

FETPROACT-EIC-05-2019:

Budget allocation between sub-topics



Total budget for all 3 sub-topics is 87,4 M€ where **at least 35,4 M€ and up to 52,4 M€ is allocated for the sub-topic c. 'Breakthrough zero-emissions energy generation for full decarbonisation'**

Proposals from all 3 sub topics ranked in 1 list according to score.
Proposals selected for funding according to ranking list as follows:

1. Top 2 proposals from each sub-topic funded
2. 3rd proposal from each sub-topic funded if budget available
3. Proposals funded from global list until budget exhausted, respecting the min-max budget allocation for the topics.



NB only proposals above the evaluation thresholds can be funded.



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Sub-topic (a) 2019

Human-Centric AI

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The challenge: Human-Centric AI

Artificial intelligence (AI) is gaining more and more footholds in various aspects of our life. However, many issues need to be faced, like:

- Transparency and Accountability
- Robustness and Safety
- Data Governance and Privacy
- Diversity and Non-discrimination
- Human Autonomy and Oversight
- Societal and Environmental well-being





The problem

Explicability has become an essential element if users are to trust, accept and adopt the next generation of intelligent machines on a wider scale.

This initiative seeks to advance to the next AI frontier with verifiable, evidence-based features of trustworthiness (i.e., reliable and unbiased alignment of values, goals and beliefs) and transparency (explainable performance), exploring radically new approaches (e.g., inspired from neuro-science, cognition or social science).



Human-centric?



For instance,

- explanation could be more tightly intertwined with the decision making process itself

- decisions can be challenged, interpreted, refined and adjusted through mutual exchange, introspection (e.g., self-awareness of biases, reflecting on the internal functioning of the learning system, or on what caused a wrong or unacceptable decision)

- active learning of both system and user, for example through dialogue or other forms of multi-modal interaction aimed at establishing mutual trust.



Solutions: Beyond the state-of-the-art

New data collection and ownership/governance models that go beyond the dominant off-line and centralised data processing should be investigated, and new avenues, such as for incremental, unsupervised, active, one-shot and 'small data' machine learning, should be explored.

Novelty often comes from radical interdisciplinarity – compose your consortium accordingly.

Clear potential for social sciences and humanities.

Don't think only tech

See [Artificial Intelligence for Europe \(COM\(2018\) 237 final, 25.4.2018\)](#) and [Coordinated Plan on Artificial Intelligence \(COM\(2018\) 795 final, 7.12.2018\)](#).



The European AI Alliance

Joint reflection on the future of AI in Europe

Full mobilisation of all stakeholders needed: industry, academia, civil society

Supported by high-level expert group on AI and an online platform

Goal: Making it a reference platform for thinking and reflecting on AI



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Sub-topic (b) 2019

**Implantable autonomous devices
and materials**

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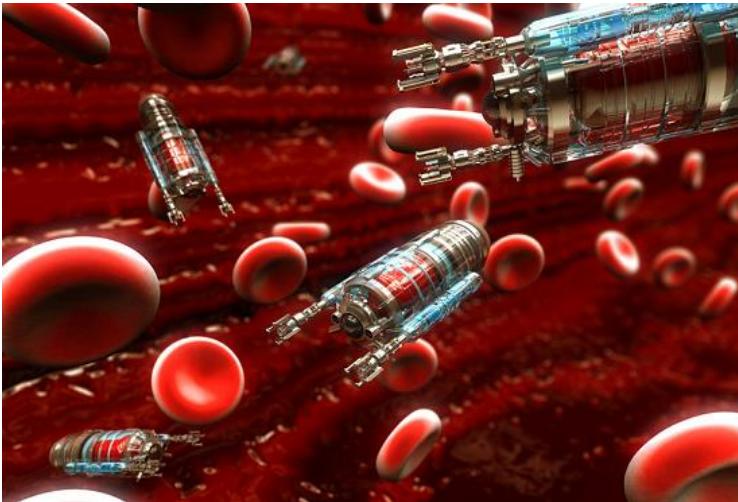


Background – what do we have?

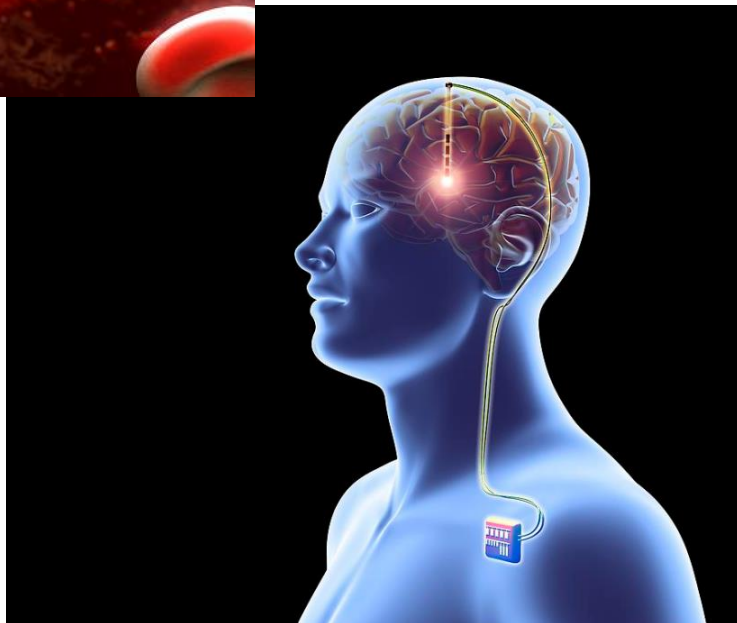


Current implants do not last long/the materials are not bio-compatible/are not adaptable/no clever sensing/no shape/function change/no movement/no power management

Challenge and Scope



Radically new biomedical tech is needed for **implantable devices and materials** with dramatically longer functional lifetimes



Examples of properties



Smart sensing

I managed to develop
a computer with
self awareness...



That's a
start...



Self-Awareness



Adaptation
(form and function)



Self-repair



Bio-mimetism



In-situ integration

And finally, let's not forget!



**Power generation/
management**



**Ethical implications
of the technologies**



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Sub-topic (c) 2019

**Breakthrough zero-emissions
energy generation for full
decarbonisation**

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Zero-emissions energy generation: Scope

Early exploration (TRL 1-3) of any new form of thermal and/or electrical energy generation.

Proposed technology should produce no CO₂ and have minimal use of rare/toxic materials.



Equipment should be:

- Stand-alone, mobile, portable, movable (i.e., no grid plant)
- *Potentially* low-cost and high energy density

Identified application area (e.g., remote uses, emergency, transport,...)

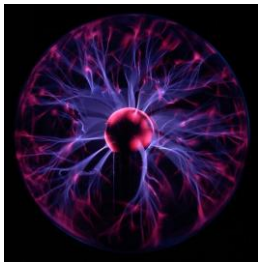
Clear/ambitious performance targets and milestones needed

Zero-emissions energy generation

Scope – example directions

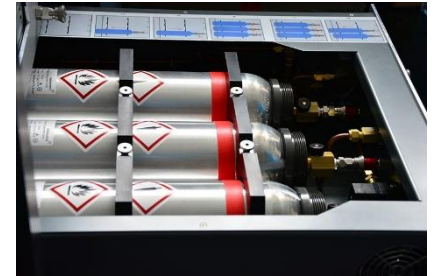
Hydrogen storage eg metal hydrides

- Large and safe increase in storage density possible?



Plasma systems

- Plasmas are the most energetic state of matter
- Can they be confined in a portable device?



Cavitation systems

- Cavitation assisted energy harvesting systems:
- Can they provide enough energy in a portable form?



Research related to batteries, fuel cells and solar cells is not excluded, provided it fits the scope of the call.

Note: These are not preferred approaches, just possible examples



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EIC Pathfinder
FET Proactive 2020**

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EIC Pathfinder - FET Proactive - 2020

Emerging paradigms and communities

- Stimulate the emergence of a **new technological paradigm**
- **FETPROACT-EIC-07-2020: Selected emerging paradigms:**

2020
€50M

- *Future technologies for social experience*
- *Measuring the unmeasurable – Sub-nanoscale science for Nanometrology*
- *Digital twins for the life-sciences*

- **FETPROACT-EIC-08-2020: Environmental intelligence:**

2020
€18M

- *new techniques for creating and using dynamic models of environmental evolution*
- *radically novel approaches to resilient, reliable and environmentally responsible in-situ monitoring*

FETPROACT-EIC-07-2020

FET Proactive: emerging paradigms and communities

Scope:

... technological paradigm within the scope of one of the following sub-topics

- a. Future technologies for social experience*
- b. Measuring the unmeasurable – Sub-nanoscale science for Nanometrology*
- c. Digital twins for the life-sciences*

Note: these EIC Pathfinder topics have been selected with the help of the FET Advisory Group, for their clear need of breakthrough, and high future innovation potential.



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Sub-topic (a) 2020

**Future technologies
for social
experience**

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FETPROACT-EIC-07-2020

sub-topic a. Future technologies for social experience

- What's next in social media?
- Can Europe develop its own take on this?
- How will high-bandwidth connectivity like 5G and beyond change social media?
- What will VR, AR, mixed reality ('XR') look like?
- How can active interaction spaces remain transparent and accountable?
- How to achieve trust, privacy, safety, respect, inclusion, belonging, etc., 'by design'?
- What can be learned from human 'natural' perception and interaction space (e.g., nearness), and from social cognition (e.g., believe formation)?
- What are the immersive and multimodal techniques needed and their coupling to human sensori/motor- and cognitive processes?
- What are (could be) the long-term implications and impacts on persons, especially from extensive and always-on use?

FETPROACT-EIC-07-2020

sub-topic a. Future technologies for social experience

'It is currently not known whether the sociocultural parameters implicit in natural situations of social interaction carry over to virtual or hybrid interactions or whether this leads to adaptations, new potential conflicts requiring recalibration of affective signals, cues carrying trust, empathy, conflict resolution.'

'The topic addresses the redefinition of the personal and social interaction space in light of increasing virtualisation, space-time displacement, information pressure, ubiquitous intelligence, uncertainty and trust issues (dis- and mis-information, anomaly detection in information sources and content, unwanted information and similar concepts in the social realm, like opinion dynamics and social believe formation.'



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Sub-topic (b) 2020

**Measuring the
impossible**

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FETPROACT-EIC-07-2020**sub-topic b. Measuring the unmeasurable – Sub-nanoscale science for Nanometrology**

- New approaches for nano- and sub-nano metrology:
 - Dimensional, 1-2-3D-characterisation at nano (10^{-9} m) or pico-metre (10^{-12} m) scales.
 - Temporal, transient phenome at femto-second (10^{-15} s) or atto-second (10^{-18} s).
- Research from novel measurement concept up to a technique and/or method including prototype measuring devices/setups and procedures.
- Challenges in measurement in e.g., morphology, composition, reactivity, energy, dynamics or relevant optical, electronic, chemical and biochemical properties.
- Sound metrological aspects like quantification of uncertainty and traceability, and minimizing sample damages.



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Sub-topic (c) 2020

**Digital twins for the
life sciences**

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FETPROACT-EIC-07-2020

sub-topic c. Digital twins for the life-sciences

A digital twin is a digital replica of a living or non-living physical entity. By bridging the physical and the virtual world, data is transmitted seamlessly allowing the virtual entity to exist simultaneously with the physical entity. [Wikipedia](#)

Digital Twin Technology was named one of Gartner's Top 10 Strategic Technology Trends for 2017, but what really is it and how can ..

In practice mostly for engineered assets:

- A *digital twin* is a virtual representation of a physical product or process, used to understand and predict the physical counterpart's performance characteristics. (Siemens)
- *Digital twins* are software representations of assets and processes that are used to understand, predict, and optimize performance in order to achieve improved ... (GE)
- A *digital twin* is a virtual representation of a physical object or system across its lifecycle, using real-time data to enable understanding, learning and reasoning. (IBM)

FETPROACT-EIC-07-2020

sub-topic c. Digital twins for the life-sciences

- Extending the digital twin concept to non-engineered biological objects and processes.
- Pushing frontiers in data-driven modelling.
- Tight coupling between twin and biological structures at different levels (from biochemical pathways to human individuals). In-vivo or in-vitro, or using hybrid twins, like organ/body-on-chip.
- Sensing, imaging, monitoring and possibly interaction/actuation/intervention for coupling.
- Clinical or non-clinical scenarios can be explored.
- Uses for personalised medicine, advanced diagnostics, therapeutic approaches, theranostics and prevention (lifestyle, nutrition, environmental factors).
- Ethical implications should be included: privacy, (in-)equality, liability, segregation, etc.

FETPROACT-EIC-07-2020**FET Proactive: emerging paradigms and communities**Expected Impact:

- Foundational knowledge and technology
- Potential for future returns (societal or economic)
- Beacon of excellence, future orientation by involving new generation of researchers and innovators.
- Establish new interdisciplinary communities
- Innovation eco-system in RRI spirit (engagement, education, gender, long-term societal, ethical and legal implications).

FETPROACT-EIC-07-2020

FET Proactive: emerging paradigms and communities

Indicative size and relevant call conditions:

- EUR 4-5 million, up to 4 years
 - Ask what you need, no more, no less
 - Don't stretch the proposal to want to do everything
- Minimum 3 partners from 3 MS/AC – no hidden expectations
- 'Cascading grants' allowed, for:
 - Punctual small scale experimentation and use of project results by third parties
 - To award a prize following a contest
 - Needs to be described in the proposal
 - Max 60.000 EUR per third party
- Maximum 30 A4 pages for Section 1 to 3 of Part B.

FETPROACT-EIC-07-2020

FET Proactive: emerging paradigms and communities

- Call opens 19 November 2019
- Call deadline: 22 April 2020
- FET Proactive has its specific evaluation criteria, thresholds and weights:
 - Excellence (Threshold: 4/5, Weight: 60%)
 - Impact (Threshold: 3.5/5, Weight: 20%)
 - Implementation (Threshold: 3/5, Weight: 20%)
- Selection of proposals above threshold:
 - Top two for each sub-topic (within total topic budget of EUR 50 million)
 - Third one for each sub-topic according to ranking
 - According to ranking for remaining budget



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2020

**Environmental
Intelligence**

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FETPROACT-EIC-08-2020

Environmental Intelligence

Specific Challenge:

- Build a deeper understanding of the socio-environmental inter-relationships, for example, by testing and validating complex theoretical models.
- Creating new synergies between distant communities of environmental modelling, advanced sensor research, social sciences, and artificial intelligence.
- Taking critical steps towards the realisation of a full-fledged system for environmental intelligence.

➤ 'A digital twin' for the environment ?

FETPROACT-EIC-08-2020

Environmental Intelligence

- a.** New techniques for creating and using dynamic models of environmental evolution
- Combining in-situ and remote sensing/observation with other environmental data sources, human behavior data, economics and social sciences.
 - Interplay of natural and societal systems: policy, economics, human behavior, social norms' impact on evolution and exploitation of the environment, and vice-versa.

FETPROACT-EIC-08-2020

Environmental Intelligence

b. Radically novel approaches to resilient, reliable and environmentally responsible in-situ monitoring

- In-situ sensing technology (physical, chemical, biological, behavioral) for environmental monitoring.
- Focus on under-sampled but critical parameters and environments.
- Affordable and responsible sensor life-cycles.
- Advanced research on networking aspects is not addressing this sub-topic.

FETPROACT-EIC-08-2020

Environmental Intelligence

- Focus on one or a few critical resources (e.g., water, air) and on the most critical challenges for major improvement.
- Responsible Research and Innovation (RRI) approaches are encouraged.
- FAIR Data Principles (findable, accessible, interoperable and re-usable) and relevant European standards.
- Collaboration between projects across the two sub-topics is expected, towards delivering a blue-print for a full-fledged system for environmental intelligence.

FETPROACT-EIC-08-2020

Environmental Intelligence

Indicative size and relevant call conditions:

- EUR 4 million, up to 4 years
 - Ask what you need, no more, no less
 - Don't stretch the proposal to want to do everything
- Minimum 3 partners from 3 MS/AC – no hidden expectations
- Maximum 30 A4 pages for Section 1 to 3 of Part B.
- Note: cascading grants not allowed.

FETPROACT-EIC-08-2020

Environmental Intelligence

- Call opens 19 November 2019
- Call deadline: 22 April 2020
- FET Proactive has its specific evaluation criteria, thresholds and weights:
 - Excellence (Threshold: 4/5, Weight: 60%)
 - Impact (Threshold: 3.5/5, Weight: 20%)
 - Implementation (Threshold: 3/5, Weight: 20%)
- Selection of proposals above threshold:
 - Top two for each sub-topic (within total topic budget of EUR 18 million)
 - Third one for each sub-topic according to ranking
 - According to ranking for remaining budget



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H2020 Work Programme 2018-2020

Enhanced EIC pilot topics in 2019

**FETPROACT-EIC-06-2019:
EIC Transition to
Innovation Activities**

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EIC Pathfinder: building on the success of Future and Emerging Technologies

FET-Open

Bottom-up – exploratory deep-tech collaborations

FET-Proactive

Top-down - consolidation of paradigms and interdisciplinary communities

Transition to Innovation

Pushing results up to TRL 6 – innovation ready



*Strategic portfolio management
through
Programme Managers*

The Challenge: bridging the gap

- Create a fertile ground for FET research results to mature, to a level where they start to be interesting for investors.
- Turn FET projects promising results into genuine technological breakthrough and disruptive innovations



2 instruments:
- FET Innovation Launchpad
- FET Transition to Innovation Activities



FET Open (CSA): FETOPEN-03-2018-2019-2020

FET Innovation Launchpad

- **Strengthening exploitation of FET results:** initial steps for turning results from FET-funded projects into innovations
- Examples of activities:
 - Market or competitiveness analysis, commercialisation process, business case development, technology assessment, consolidation of IPRs
- EU contribution of up to 100 k€ (eligibility) and up to 18 months
- Sole applicant **or** as part of a consortium from MS/AC
- 7-pages (A4) proposal
- Cut-off in 2020: introduction of lump sums

FETOPEN-03-2018-2019-2020: 2 cut-off dates
8 October 2019: 2.7 M€
14 October 2020: 3 M€ (pilot on lump sums)

FET Open (CSA): FETOPEN-03-2018-2019-2020

Evaluation

- Three award criteria **stay the same**
 - **Excellence**: weight of 40%, threshold of 3
 - **Impact**: weight of 40%, threshold of 3,5
 - **Implementation**: weight of 20%, threshold of 3
- Evaluation process **stays the same**
- Clear indication of specific FET result from eligible FP7/H2020 FET project
- Declaration confirming rights to exploit the FET result

Enhanced EIC Pilot

Business Acceleration Services

- For **EIC beneficiaries** (Pathfinder and Accelerator)
- **Coaching***: up to 12 days available
- **Mentoring** for individual founders, CEOs and leaders
- EIC **Community** Platform
- EIC **Networking** events, such as Corporate Days (companies meet large corporations as potential investors)

*only available to SMEs, including natural persons, or for the purpose of setting-up such a company

Scope of Transition to Innovation Activities

- Advancing TRL of promising technologies starting at TRL 2/3
- Business driven visionary leadership
- Lean and ambitious consortium
- Essential capabilities to increase the maturity of targeted technology
- E.g. activities with TT partners, licence-takers, investors and users



Conditions Transition to Innovation

- Total budget: **26M€**
- Small RIA up to 24 months
- EU contribution: 1-2M€
- Explicit links with H2020 FET OPEN and PROACT project(s)
- No duplications with activities of the original project(s)!
- Well-defined intended outcome, KPIs
- Strong exploitation plan with market potential
- Agreement on project(s) IPRs in proposal



FETPROACT-EIC-06-2019**Budget: 26M€****Transition to Innovation Activities**

- Turn promising results into **breakthrough and disruptive innovations**
- Building on results of an ongoing or finishes FET-Open or FET Proactive project (i.e., starting from **early-stage technologies**) under Horizon 2020
- **Targeted technology areas:**
 - *Micro- and Nano-technologies,*
 - *Artificial Intelligence and advanced robotics,*
 - *Technologies for the life sciences, health and treatment,*
 - *Energy technologies and climate change related technologies,*
 - *Interaction technologies (including VR, AR and Mixed Reality)*
- Projects up to 24 months, €1-2 million, indicative
- At least EUR 10.00 million and up to EUR 13.00 million will be allocated to area 'Low-carbon energy and climate change technologies'

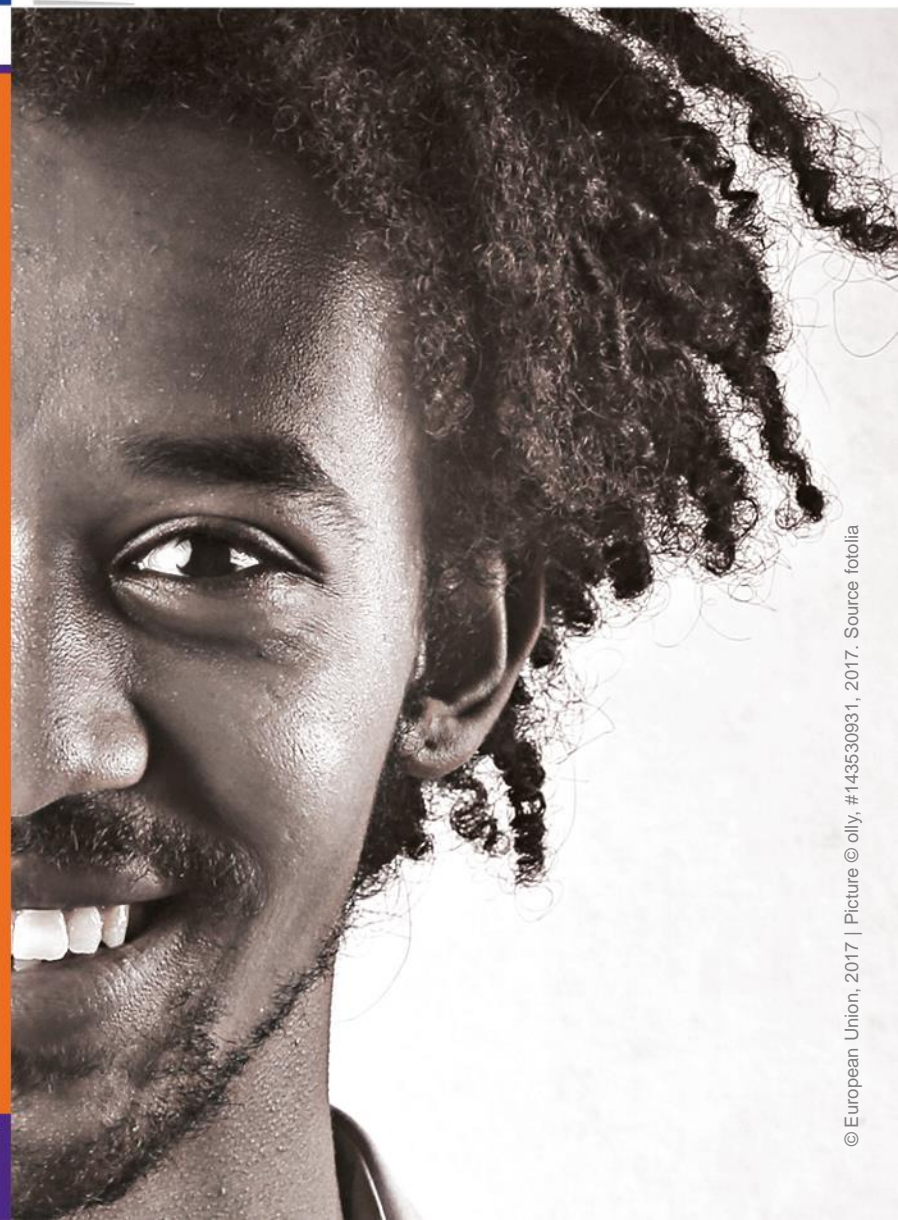


Q&A

ec.europa.eu/research/eic

 #EU_EIC

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FET and EIC work programme H2020 reference documents

*The FET WP 2018-2020 can be downloaded from
http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-fet_en.pdf*

*The EIC Pilot WP 2018-2020 can be downloaded from
http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-eic_en.pdf*

*The WP 2018-2020 for cross-cutting activities can be downloaded from
http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-cc-activities_en.pdf*

*All are part of
European Commission Decision
C(2019)4575 of 2 July 2019*

Still over EUR 640 million for cutting edge technologies under Horizon 2020, excluding EUR 300 million for the Graphene and HBP Flagships, EUR 20 million for a 2D-materials pilot line and EUR 0.25 million contribution to a FET/EIC NCP network

FET Open		
FETOPEN-01-2018-2019-2020 (RIA)	160.65	18 Sep 2019
FET-Open - Challenging Current Thinking	196.20	13 May 2020
FETOPEN-03-2018-2019-2020 (CSA or CSA-LS)	2.70	08 Oct 2019
FET Innovation Launchpad	3.00	14 Oct 2020
FET Proactive		
FETPROACT-EIC-05-2019 (RIA) (<i>EIC WP</i>)	87.40	13 Nov 2019
1. Human-Centric AI		
2. Implantable autonomous devices and materials		
3. Breakthrough zero-emissions energy generation for full decarbonisation		
FETPROACT-EIC-06-2019 (RIA) (<i>EIC WP</i>)	26.00	13 Nov 2019
Transition to Innovation Activities		
FETPROACT-EIC-07-2020 (RIA)	50.00	22 Apr 2020
1. Future technologies for social experience		
2. Sub-nanoscale science for nanometrology		
3. Digital twins for the life-sciences		
FETPROACT-EIC-08-2020 (RIA)	18.00	22 Apr 2020
Environmental Intelligence		
FETPROACT-09-2020 (RIA)	15.00	22 Apr 2020
Neuromorphic computing technologies		
FET HPC		
FETHPC-04-2020 (CSA)	0.50	22 Apr 2020
International Cooperation on HPC (Latin America)		

(2/1) **seilpeap** funded **FET-13**



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FET-Funded Deadlines (2/2)

large scale research initiative on Future Battery Technologies		
LC-BAT-12-2020 to 15-2020 (RIA and CSA) (<i>Cross-cutting WP</i>)	42.00	16 Jan 2020
1. Novel methodologies for autonomous discovery of advanced battery chemistries		
2. Sensing functionalities for smart battery cell chemistries		
3. Self-healing functionalities for long lasting battery cell chemistries		
4. Coordinate and support the large scale research initiative on Future Battery Technologies		
CE-NMBP-41-2020 (ERA-NET Cofund) (<i>Cross-cutting WP</i>)	15.00 (of which 5 from FET)	05 Feb 2020
ERA-NET on materials, supporting the circular economy and Sustainable Development Goals		
FET Flagships		
FETFLAG-05-2020 (RIA)	19.70	13 Nov 2019
Complementary call on Quantum Computing		
FETFLAG-06-2020 (CSA)	0.50	13 Nov 2019
International Cooperation on Quantum Technologies (USA, Canada and Japan)		
FETFLAG-07-2020 (CSA)	0.30	13 Nov 2019
Training and Education on Quantum Technologies		
FETFLAG-04-2020 (ERA-NET-Cofund)	15.00	07 May 2020
Quantum Flagship - ERA-NET Cofund		

Still over EUR 640 million for cutting edge technologies under Horizon 2020, excluding EUR 300 million for the Graphene and HBP Flagships, EUR 20 million for a 2D-materials pilot line and EUR 0.25 million contribution to a FET/EIC NCP network



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Extensive EIC FAQ published

- 153 questions and answers
- Includes dedicated sections on Pathfinder (12) and Transition from Pathfinder to Accelerator (8)
- <https://ec.europa.eu/easme/sites/easme-site/files/eic-faq.pdf>
- Distributed already to FET NCPs
- Please send us your further questions to be included in this FAQ

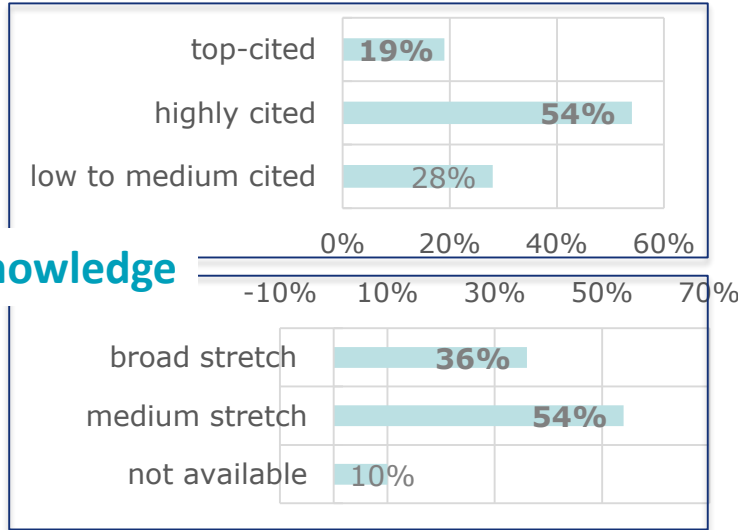
FET Impacts

evidence from 224 FP6 & FP7 projects

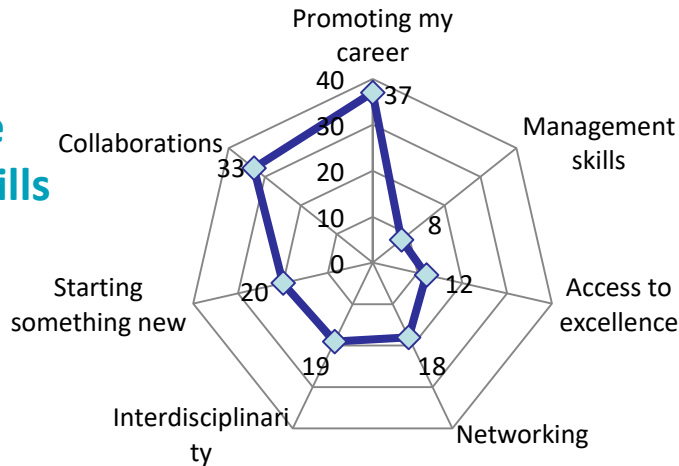


FET_TRACES Report

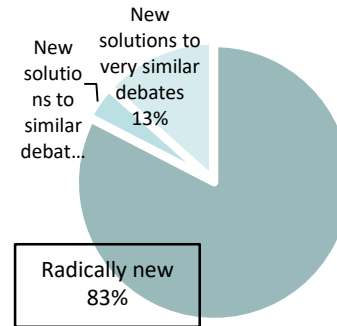
Knowledge



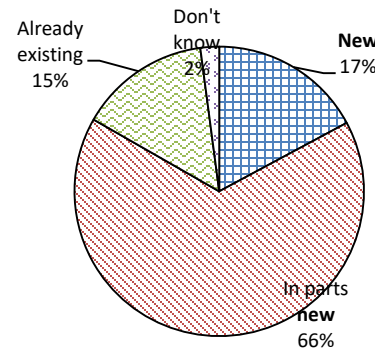
People and skills



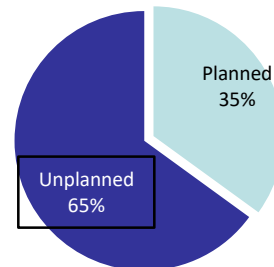
Novelty of results



Novelty of collaboration



Serendipity



From now on...

- *Be ambitious, follow your 'dream' and have fun*
 Your proposal is just a starting point
 Don't write it for 'us', but for people like you
 Deliver what you want or need, not what you think 'we' want
- *Consortium as embryonic ecosystem*
 There are no hidden expectations from our side
 No cosmetic roles – keep it simple
 Work with the best (don't just read their books)
 Novelty probably starts here
- *Collaborate, collaborate, collaborate...*
 Write your proposal together
 Collaboration driven by joint goals and mutual learning
 Explore new ways of working/learning together
- *Communicate and engage*
 Scientific publications
 Inspire others!
 - Social network, accessible and understandable material
 - Engage beyond scientific community

Future Tech Week: 23-29 Sept '19

- *Groups* FET-related activities from across Europe in a single virtual event
- *Highlights* research and innovation excellence within FET/Pathfinder
- *Encourages* diversity and creativity:
 - Workshop
 - Lecture
 - Demonstration
 - Installation
 - Art work
 - ...



Featured on large video wall during week of the R&I Days, Brussels, 24-26 September 2019

<http://futuretechweek.fetfx.eu/>



Thank you

ec.europa.eu/research/eic

 #EU_EIC

Research and
Innovation

